IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: P. Bonutti
Application No.: 10/685,117
Filed: October 14, 2003
For: APPARATUS AND METHOD FOR TREATING A FRACTURE OF A BONE

Confirmation No.: 4436
Group Art Unit: 3734
Examiner: Kevin Truong
Docket No.: 782-A03-009-3

AMENDED APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Notification of Non-Compliant Appeal Brief dated October 1, 2007. Appellant hereby provides his Amended Appeal Brief in accordance with 37 C.F.R. §41.37 and MPEP §1205.

Specifically, Applicant has herein amended the section entitled "Summary of Claimed Subject Matter" and "Argument" to further set forth reference to the specification by column and line number, and has added the section entitled "Related Proceedings Appendix" to bring the brief into compliance under 37 C.F.R. §41.37.

Appellant hereby respectfully submits this Amended Appeal Brief in support of his appeal to the Board of Patent Appeals and Interferences of the Examiner's final rejection of claims 4, 8-14, 16, 18, 20-24, 26-29, and 31-38 of the above-referenced application.

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1. REAL PARTY IN INTEREST

The real party of interest is MarcTec, LLC, an Illinois Limited Liability Company, the assignee of record.

2. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

3. STATUS OF CLAIMS

Claims 1-3, 5-7, 15, 17, 19, 25, and 30 have been cancelled and claims 4, 8-14, 16, 18, 20-24, 26-29, and 31-38 are pending. The pending claims were finally rejected in the Office Action dated January 22, 2007, and are on appeal. Attached hereto is an Appendix containing a copy of claims 4, 8-14, 16, 18, 20-24, 26-29, and 31-38, which are the claims involved in this appeal.

4. STATUS OF AMENDMENTS

Appellant proposed an amended claim 8 on March 22, 2007 to correct a typographical error and also submitted further clarifying remarks about the claimed invention. An advisory action mailed on June 1, 2007 entered Appellant's proposed amendment and reiterated the rejection of the pending claims based on the final office action mailed on January 22, 2007. Appellant filed a Notice of Appeal on June 22, 2007.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER

Treating fractures in bone often involves finding ways to realign the separated bone fragments and apply pressure between them so that the fracture is stabilized and the bone fragments may eventually heal. Orthopedic implants have been designed to assist in stabilizing fractured bone fragments, but often the resultant applied pressure is achieved in very different ways, with varying success, and with varying complexity of components and procedures.

Some implant designs, for instance, are wedged into bone or apply localized pressure. One example is the Anderson '194 patent relied on by the examiner. In many instances, however, this design may not be an effective treatment if the bone near the implant is unable to withstand the forces applied to them. As will be explained in greater detail below, the implant described in the Anderson '194 patent requires application of high, localized compressive forces in order to operate as intended.

In contrast, the claims at issue in this appeal are directed to bone suture assemblies that allow a surgeon to treat a fractured bone by applying compressive forces over a distributed area and with greater control over the direction and intensity of compressive forces applied to the bone. In particular, all of the claims utilize a rigid plate that may be placed near the area of bone fracture. A suture is associated with the plate and disposed through a passageway formed in the bone. Once the rigid plate and suture are in a desired position, the physician may apply tension to the suture so that the rigid plate is pulled against the bone. This design allows any applied pressure to be distributed over the area of the rigid plate, and because the plate is rigid there is little risk of stress concentrations being formed. It also allows the physician greater control over the degree of tension to apply to the suture.

Many other features in the claims are additional novel steps or components that can be performed or provided. These additional features will be discussed in greater detail below.

For purposes of the Examiner's rejections based on the Anderson '194 patent, Appellant respectfully submits that none of the claims stand or fall together. The reasons why Appellant believes the claims are separately patentable for purposes of the pending rejections based on Anderson '194 are as follows:

Claims 4, 8, 13 and 23 are independent. While similarities can be found between these claims, such as the use of a rigid plate as described above, many claims include one or more distinct claim elements not found in the other claims that provide additional grounds of novelty over Anderson '194.

Independent claim 4, for instance, recites a bone suture assembly having a second rigid bone plate, while claim 8 recites a tubular member positionable within a fractured bone. Moreover, independent claim 13 recites that the suture assembly includes a suture anchor and fastener positioned through the bone plate to help hold it to the bone. Claim 23 is a method claim instead of an apparatus claim where at least one screw helps fasten the bone plate to the bone. As will be explained in greater detail below, the reference relied on by the Examiner to reject these claims fails to disclose or suggest these features as well as several other claimed features that are found in two or more of these claims. Thus, Appellant believes it is appropriate that the claims should not be grouped together.

The claims that depend from each of the independent claims also recite features that are distinct from other claims and not disclosed by the Anderson '194 patent. Claims 9 and 10, for example, make clear that the tubular member is large enough to be packed with bone particles (claim 9) or osteoconductive protein (claim 10). Claim 11 recites that the passageway through the bone may be nonlinear, while claim 12 recites that the suture is disposed within at least one tubular member disposed inside the nonlinear passageway. As will be explained below, nonlinear passageways provide even greater options for how a physician can apply stabilizing forces to a fractured bone that appellant contends would not be possible with the design of Anderson '194 because of the higher tension required of the cable in order for it to function as intended.

Dependent claim 14 describes using multiple suture anchors spaced apart from each other, while claim 16 further explains that the suture anchors can be on opposing sides of the treated fracture. And dependent claim 18 recites that a fastener extending across the fracture may be used with the bone suture assembly, and claim 20 recites that the fastener may be a screw. Dependent claims 21 and 22 further define that a suture anchor may be a suture retainer and that the suture retainers may have deformable material that can help securely hold the suture.

Some of the claims that depend from independent claim 23 recite similar features as described above, but because of the differences between the features recited in the independent claims these dependent claims can not be grouped with other claims having a different base claim. In addition, some claims recite features that are not described in other claims. For example, claim 26 recites that at least one screw at least one screw that fastens the bone plate to the bone has a length less than a diameter of the bone, whereas claim 27 recites that the screw is longer than the diameter of the bone. Some of the claims, such as claims 31-33 describe particular steps that may be taken when installing the bone suture assembly.

The remaining claims describe still more features that are distinct from the other claims and provide separate grounds for patentability over Anderson '149. For example, claims 34 and 35 recite features relating to the use of a plurality of suture sections. Finally, claims 36-38 are distinct from other claims because they depend from independent claim 4, which is distinct from all of the other independent claims for the reasons provided above. Additionally, these claims are distinct from each other because claim 36 relates to the position of the suture with respect to the fracture and claims 37 and 38 pertain to a channel defined on the rigid bone plate where the suture may be placed.

Independent claim 4 recites, *inter alia*, a bone suture assembly 32g for treating a fracture of a bone comprising: a first rigid bone plate 184 positionable proximate to the bone 20g; a second rigid bone plate 186 positionable proximate to the bone 20g generally opposite the first bone plate 184; a suture 38g connected with the first and second rigid bone plates 184,186 to thereby stabilize the fracture, the suture positionable through a passage 40g in the bone 20g; and at least one fastener positionable through the first rigid bone plate 184 into the bone to hold the first rigid bone plate 184 to the bone. The subject matter set forth in claim 4 is found in the specification at ¶ [0005] and ¶ [0006] and at ¶ [0127]- ¶ [0134] and is shown in Fig. 10.

Dependent claims 11-12 and 36-38 depend from claim 4 and also recite features that are distinct from other claims and not disclosed by the Anderson '194 patent. Claim 11 recites that the passageway through the bone may be nonlinear (¶ [0134]), claim 36 recites that the suture is positionable through the fracture 40g (¶ [0130]), claim 37 recites that at least one of the bone plates 184, 186 includes a channel extending between a bone-contacting surface of the plate and

a non-bone contacting surface of the plate (*See* Fig. 10), and claim 38 recites that the surfaces face in generally opposite directions (*See* Fig. 10).

Independent claim 8 recites, *inter alia*, a bone suture assembly for treating a fracture of a bone comprising: a first bone plate positionable proximate to the bone 20j; a suture positionable through the first bone plate and across the fracture 26j of the bone 20j to thereby stabilize the fracture 26j; and a tubular member 240 positionable in the bone 20j through the fracture 26j, generally orthogonal to the first bone plate, wherein the tubular member 240 remains in the bone 20j such that the suture 38j is disposed within the tubular member 240. The subject matter set forth in claim 8 is found in the specification at ¶ [0005] and ¶ [0006] and at ¶ [0149]- ¶ [0217] and is shown in Figs. 13-15.

Dependent claims 9 and 10 depend from independent claim 8 and recite further features of the invention. Claims 9 and 10 recite that the tubular member 240 is packed with bone particles (¶ [0178]) or osteoinductive protein (¶ [0171]).

Independent claim 13 recites, *inter alia*, a bone suture assembly for treating a fracture of a bone comprising: a first suture anchor 50g positionable proximate to the bone 20g; a rigid bone plate 184 positionable between the first suture anchor 50 and the bone 20g, the rigid bone plate 184 and first suture anchor 50g positionable generally on the same side of the bone; a suture 38g extending through the rigid bone plate and connected with the first suture anchor 50g, the suture 38g positionable across the bone 20g to thereby stabilize the fracture 26g; and at least one fastener positionable through the rigid bone plate 184 into the bone 20g to hold the rigid bone plate 184 to the bone 20g. The subject matter set forth in claim 13 is found in the specification at ¶ [0007] and at ¶ [0127]- ¶ [0134] and is shown in Fig. 10.

Dependent claims 14, 16, 18, 20-22, and 34 depend from independent claim 13 and recite further features of the invention. Claim 14 recites a second suture anchor 52g positionable at a location spaced from the first suture anchor 50g and connected by the suture 38g (Fig. 10). Claim 16 recites a passage between the anchors 50g, 52g with the suture 38g disposed within the passage (Fig. 10). Claims 18 and 20 describe further limitations of the fastener extending across the fracture and including a screw 192. (¶ [0131] - ¶ [0134] & Fig. 10). Claims 21 and 22 recite that the first and second suture anchors 50g, 52g are suture retainers including deformable

material to hold the retainers to the suture. (¶ [0008] & ¶ [0114]). Claim 34 recites that the suture 38g includes a plurality of generally parallel sections. (Fig. 10).

Independent claim 23 recites, *inter alia*, a method for treating a fracture of a bone comprising: forming at least one passage 40g through the bone, where the passage 40g traverses the fracture 26g; positioning at least one suture anchor 50g proximate to the bone 20g; positioning at least one bone plate 184 between at least one suture anchor 50g and the bone 20g; fastening at least one bone plate 184 to the bone 20g with at least one screw 196; moving at least one suture 38g through the passage 40g in the bone and through at least one bone plate 184; attaching at least one suture 40g to at least one suture anchor 50g; and tensioning at least one suture to stabilize the fracture of the bone. The subject matter set forth in claim 23 is found in the specification at ¶ [0009] and ¶ [0011] and at ¶ [0127]- ¶ [0148] and is shown in Figs. 10-12.

Dependent claims 24, 26-29, and 31-33 depend from independent claim 23 and recite further features of the invention. Claim 24 recites that at least one suture anchor is a suture retainer (¶ [0114]). Claim 26-29 recite further limitations of the screw 196 having a length less than the diameter of the bone or a length greater than a diameter of the bone, the screw including at least one nut, and at least one screw extending across the fracture of the bone. (¶ [0131]-¶ [0133]). Claim 31 recites attaching at least one suture to at least one suture anchor prior to moving at least one suture, and wherein moving at least one suture includes moving at least one suture attached to at least one suture anchor through at least one passage. (¶ [0112]). Claim 32 recites changing the orientation of at least one suture anchor from a first to second configuration to cause at least one suture anchor to become proximate to the bone and impassable through at least one passage. (¶ [0011]). Claim 33 recites tensioning at least one suture between at least two suture anchors to stabilize the fracture. (¶ [0032]).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 4, 8-14, 16, 18, 20-24, 26-29, and 31-38 are anticipated by U.S. Patent No. 5,919,194 to Anderson.

7. ARGUMENT

The Claims Are Patentable Over the Reference Relied on by the Examiner

As previously discussed, the pending claims in this application are generally directed to bone suture assemblies and bone fracture treatment methods that use a rigid plate, suture, and other features or steps to help stabilize fractured bone. For the reasons that follow, appellant respectfully submits that many features recited in the independent and dependent claims provide grounds for patentability. Appellant first discusses why some claim elements that are recited in multiple claims are lacking in Anderson '194, and then appellant will discuss in greater detail why each pending claim is patentable over Anderson '194.

In his June 1, 2007 Advisory Action and in his January 22, 2007 Final Office Action, the Examiner rejected all of the claims under 35 U.S.C. 102(e) are being anticipated by US Patent 5,919,194 to Anderson. Figures 1 and 2 of the Anderson '194 patent, which are provided below, illustrate how the implant described in Anderson '194 works:

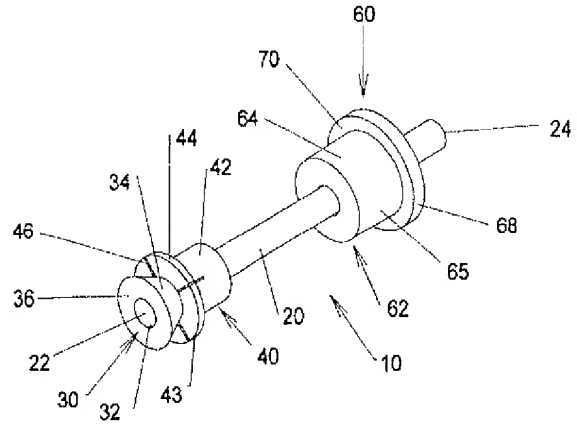


FIG.1

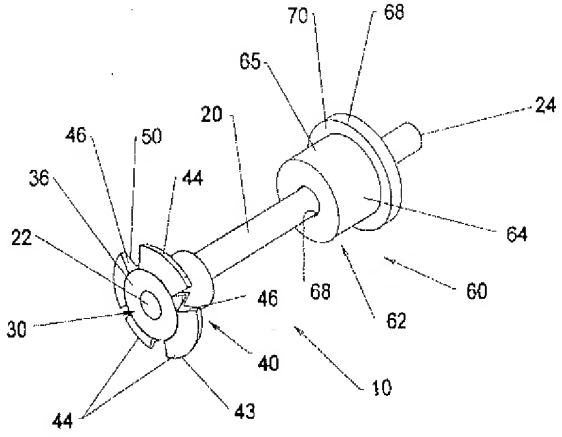


FIG.2

As described in columns 4, 5, and 6 of the Anderson '194 patent, Figure 1 illustrates the implant configuration prior to being used to treat a bone fracture. The implant has a "capturing assembly" 60 on one side and a "locking member" 40 and "spreader member" 30 on the opposing side. The middle portion of the implant has only a cable 20 that is integrally formed

with the spreader member 30. (*See* col. 4, lns. 34-36). Thus, the initial configuration of the implant has the spreader member 30 extended beyond the locking member 40 and the integrally formed cable 20 extending through the locking member 40 and connecting with the capturing assembly 60 on the opposing side of the implant. The locking member 40 has multiple fins 44 that are defined by notches cut into the locking member. (*See* col. 4, lns. 55-60).

Anderson '194 does not have a rigid plate

When the implant is deployed, Anderson '194 explains that tension must be applied to the cable in sufficient amount to force the spreader member to deform the locking member so that fins 44 to bend or splay radially outward until the implant reaches the configuration illustrated in Fig. 2. (*See* col. 6, lns. 14-25). Thus, in order to achieve this configuration, the fins must not be rigid and the cable must be pulled with sufficient tension to cause the deformation.

In addition to the fins not being rigid as recited in the pending claims, they also are not a plate. As illustrated by its definition in Cambridge Dictionaries Online, a plate is widely known as "a flat piece of something that is hard and does not bend." Neither feature of this definition is met by the locking member because it is neither rigid nor flat. Likewise, the capturing assembly 60 on the opposing side of the implant described in Anderson '194 also is not a rigid plate as recited in the independent claims because the bone is engaged by an annular shaped flange. (*See* col. 5, lns. 22-27).

Anderson '194 does not describe a suture

The cable 20 described in Anderson '194 is not a suture as disclosed the pending application and recited in the claims. As stated in Anderson at col. 2, lines 28-30, the locking device includes an elongate member, preferable a cable or metal rod. As explained above, Appellant believes a cable or rod is required in Anderson '194 because of the significant loading that would be expected of it in order to deform the fins 44 on the locking member 40. It is unlikely a suture would provide this capability in Anderson '194, and therefore skilled artisans would not consider a suture as a suitable equivalent to a cable or rod when considering the Anderson '194 patent.

In addition, Anderson '194 states that the cable or rod may be required to frictionally or deformationally engage with other components of the implant. (Col. 6, lns. 40-45). To illustrate this point, one embodiment of Anderson '194 explains that an elongate substantially rigid rod may be provided instead of the cable. (*See* col. 6, lines 40-66). The rod has threads extending at least partially along a proximal portion of its length and, while maintaining a predetermined tension on the proximal end 24 of the cable 20, the threaded member 80 is rotated. This causes it to move distally into the aperture 74, thereby forcing the flange 78 radially inward and deformationlly or frictionally engaging the cable 20. Thus, skilled artisans considering Anderson '194 would not consider a suture as interchangeable with the cable or rod described for that implant, and therefore it would be inappropriate to rely on this modification to reject the pending claims.

Anderson '194 does not disclose a tubular member positionable in the bone

Many claims in the pending application recite a tubular member that is positionable in the bone. This feature also is missing in Anderson '194. With reference to Fig. 6 of Anderson, an expanding tool 110 may be provided to expand the fins 44 of the locking member 40 from their initial, undeformed configuration to their enlarged condition. (*See* Fig. 6 and col. 9, lines 1-4). The tool 110 comprises an elongate tubular member 112 and has a passage 118 extending therethrough for receiving the cable 20, but because it is integrally formed on or attached to the handle 114 it is not positionable in the bone as the tubular member claim element is recited in the pending claims.

Claim 4 and its dependent claims are patentable over Anderson '194

Independent claim 4 recites, *inter alia*, a bone suture assembly for treating a fracture of a bone comprising: a first rigid bone plate positionable proximate to the bone; a second rigid bone plate positionable proximate to the bone generally opposite the first bone plate; a suture connected with the first and second rigid bone plates to thereby stabilize the fracture, the suture positionable through a passage in the bone; and at least one fastener positionable through the first rigid bone plate into the bone to hold the first rigid bone plate to the bone.

For the reasons provided above, Anderson fails to disclose either a first or second rigid plate, or a suture. In addition, the fins 44 relied upon by the examiner do not have a fastener positioned through it and into the bone as recited in claim 4. Not only is no fastener described in Anderson, but it does not appear to be feasible to provide one given the relatively small surface area created by the fins and locking member. Furthermore, Anderson '194 discourages the use of fasteners in the background and contends that it is better to only obtain holding power through contact with the hard, outer surface of the bone. (*See* col. 1, line 65 to col. 2, line 10).

The claims depending from independent claim 4 likewise recite features not found in Anderson '194. Claim 11 recites that the passageway where a portion of the bone suture assembly is disposed may be non-linear. This configuration allows for different types of loading to be imparted to the treated bone fracture. This feature is not disclosed anywhere in Anderson '194. Moreover, because Anderson '194 requires high tension forces to deform the locking member, however, such a passageway configuration would likely be unsuitable.

Claim 12, which depends from claim 11, also recites that the non-linear passageway has a tubular member disposed in it. Once again, Anderson '194 fails to disclose a tubular member positionable in bone at all, and it is even more unlikely that skilled artisans would consider such a configuration given the loading of the implant of Anderson '194.

Dependent claim 36 describes positioning suture through the fracture, which is missing from Anderson '194 for the reasons previously discussed. Anderson '194 doesn't teach or suggest a suture and skilled artisans would not consider it a suitable replacement given the configuration and operation of that design.

Dependent claim 37 recites that the rigid plate has a channel extending through it where the suture may be positioned. Again, no such configuration is found in Anderson '194 because Anderson teaches to integrally form the cable with the spreader member. Claim 38 recites that the channel extends from the bone contacting surface of the rigid bone plate to the opposite side of the plate. Once again, not only are the features of a rigid plate and suture are missing, but there is no teaching to provide a channel in the plate that extends from one side to the other.

Claim 8 and its dependent claims are patentable over Anderson '194

Independent claim 8 recites, *inter alia*, a bone suture assembly for treating a fracture of a bone comprising: a first bone plate positionable proximate to the bone; a suture positionable through the first bone plate and across the fracture of the bone to thereby stabilize the fracture; and a tubular member positionable in the bone through the fractured, generally orthogonal to the first bone plate, wherein the tubular member remains in the bone such that the suture is disposed within the tubular member. As described above with respect to claim 4, Anderson does not disclose a rigid bone plate or a suture. Anderson also fails to disclose a tubular member positionable within the bone for the reasons provided above.

Once again, the claims depending from claim 8 also recite novel features that are patentably distinct from anything disclosed by Anderson. Claims 9 and 10 disclose packing the tubular member with bone particles (claim 9) or bone osteoinductive protein (claim 10). In contrast, Anderson '194 not only does not describe a tubular member positioned in the bone, but also the configuration of the implant of Anderson is not amenable to filling the hole drilled into the bone because the components block access. Anderson teaches that the components should be configured so that they provide only slight gaps between them. (*See, e.g.*, col. 4, line 63 to col. 5, line 12).

Claim 13 and its dependent claims are patentable over Anderson '194

Independent claim 13 recites, *inter alia*, a bone suture assembly for treating a fracture of a bone comprising: a first suture anchor positionable proximate to the bone; a rigid bone plate positionable between the first suture anchor and the bone, the rigid bone plate and first suture anchor positionable generally on the same side of the bone; a suture extending through the rigid bone plate and connected with the first suture anchor, the suture positionable across the bone to thereby stabilize the fracture; and at least one fastener positionable through the rigid bone plate into the bone to hold the rigid bone plate to the bone.

As described above, Anderson does not disclose a bone plate or suture. Moreover, Anderson does not disclose separate elements defining a suture anchor and a bone plate. Additionally, Anderson states that fasteners inserted into the bone would be inferior and makes

no provision in its design to allow one to be used. (*See* Col. 1, lns. 65-67 & Col. 2, lns. 1-9). Thus, claim 13 is also patentable over Anderson.

The dependent claims based on claim 13 also recite novel features that are patentable over Anderson. Claim 14, for example, recites the use of multiple suture anchors that are spaced apart. The implant described by Anderson '194 describes using only one cable or rod, and, because the contact surface of the implant covers a small area, it would be impractical to use multiple cables or rods. Claim 16 is further defines where the multiple sutures would be disposed, but since there is no disclosure of multiple cables or rods and no reason to make such a modification in Anderson, there is likewise nothing in that reference that is analogous to their position.

Dependent claim 18 provides that the bone suture assembly of claim 14 may further include a fastener that extends across the fracture of the bone, while claim 20 further states that the fastener is a screw. As discussed above, there simply is no room in the implant of Anderson '194 to provide a fastener. Moreover, because the implant of Anderson '194 utilizes high tension to deform the locking member and hold the implant in place only through engagement with the outer surface of the bone, it is unlikely the addition of a fastener would be considered by skilled artisans. Thus, claims 18 and 20 also are patentable over Anderson '194.

Dependent claims 21 recites the use of suture retainers for the suture anchors of claim 14, and claim 22 further states that the suture retainers are deformable to hold the retainers to the suture. In contrast, Anderson '194 discloses that the cable or rod be "integrally formed" with the spreader member. (*See* Col. 4, lns. 34-37). Such a configuration would not be amenable to the use of a suture retainer.

Claims 34 and 35 recite the use of a plurality of generally parallel suture sections (claim 34) and a passage through the bone located between the first and second suture anchors where the plurality of suture sections are disposed. Anderson '194 does not disclose a suture, and also fails to disclose a plurality of anything going through the bone. Instead, Anderson '194 describes a single cable or rod. Moreover, because Anderson '194 fails to disclose a plurality of suture anchors it is not possible for it to disclose the location a passageway disposed between two anchors.

Claim 23 and its dependent claims are patentable over Anderson '194

Independent claim 23 recites, *inter alia*, a method for treating a fracture of a bone comprising: forming at least one passage through the bone, where the passage traverses the fracture; positioning at least one suture anchor proximate to the bone; positioning at least one bone plate between at least one suture anchor and the bone' fastening the at least one bone plate to the bone with at least one screw' moving at least one suture through the passage in the bone and through at least one bone plate' attaching at least one suture to at least one suture anchor' and tensioning at least one suture to stabilize the fracture of the bone.

As described above, Anderson does not disclose a bone plate, suture, or separate suture anchor and bone plates. In addition, Anderson also does not disclose fastening a bone plate to the bone with a screw. Because several recited elements of claim 23 are not found in Anderson '194, appellant respectfully submits that the claim is patentable over this reference.

Several features recited in the dependent claims are likewise not found in Anderson '194. Claim 24, for instance, further explains that a suture retainer may be used. As previously discussed, the use of a suture is not described in Anderson and is not likely a suitable substitution for the cable or rod, but also the cable or rod in Anderson '194 is integrally formed with the spreader member. Because a suture is not described by Anderson and that reference integrally forms the cable or rod with the spreader member, there is no discussion of using suture anchors or suture retainers.

Claim 26 recites that at least one screw is shorter than a diameter of the bone. As previously stated, Anderson '194 states that the use of fasteners disposed in the bone are inferior to the implant design that it discloses. Not only is the use of fasteners discouraged, the implant design of Anderson '194 leaves no room for one to be used. The contact area is too small and because the fins are deformed and notched from a cylindrical locking member it is unlikely that the locking member would provide a suitable surface for deploying a fastener once the material has been deformed or bent.

Claim 27 recites that a screw has a length greater than a diameter of the bone, while claim 28 further provides that a nut may be placed on the screw. Claim 29 further states that the screw

extends across the bone fracture. For the same reason as provided above for claim 26 these claim elements are not found in Anderson '194.

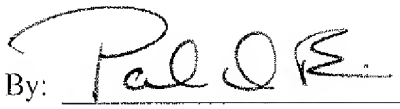
Claims 31-33 recites steps and orientation of suture anchors. Once again, Anderson '194 is silent on the use of suture anchors, so it is likewise silent on steps that may be taken when using them as recited in these claims.

In light of the foregoing, it is respectfully submitted that 4, 8-14, 16, 18, 20-24, 26-29, and 31-38 are patentable over U.S. Patent No. 5,919,194 to Anderson.

No additional fee is believed due. However, please charge any required fee (or credit any overpayments of fees) to the Deposit Account of the undersigned, Account No. 500601 (Docket No. 782-A03-009-3).

Respectfully submitted,

Dated: November 1, 2007

By: 

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8. CLAIM APPENDIX: LISTING OF CLAIMS INVOLVED IN THIS APPEAL

4. A bone suture assembly for treating a fracture of a bone comprising:

a first rigid bone plate positionable proximate to the bone;

a second rigid bone plate positionable proximate to the bone generally opposite the first bone plate;

a suture connected with the first and second rigid bone plates to thereby stabilize the fracture, the suture positionable through a passage in the bone; and

at least one fastener positionable through the first rigid bone plate into the bone to hold the first rigid bone plate to the bone.

8. A bone suture assembly for treating a fracture of a bone comprising:

a first bone plate positionable proximate to the bone;

a suture positionable through the first bone plate and across the fracture of the bone to thereby stabilize the fracture; and

a tubular member positionable in the bone through the fracture, generally orthogonal to the first bone plate, wherein the tubular member remains in the bone such that the suture is disposed within the tubular member.

9. A bone suture assembly as defined in claim 8 wherein the tubular member is packed with bone particles.

10. A bone suture assembly as defined in claim 8 wherein the tubular member is packed with bone osteoinductive protein.

11. A bone suture assembly as defined in claim 4 wherein the passage is nonlinear.

12. A bone suture assembly as defined in claim 11 wherein at least one tubular member is disposed within the nonlinear passage and wherein the suture is disposed within at least one tubular member.

13. A bone suture assembly for treating a fracture of a bone comprising:

a first suture anchor positionable proximate to the bone;

a rigid bone plate positionable between the first suture anchor and the bone, the rigid bone plate and the first suture anchor positionable generally on the same side of the bone;

a suture extending through the rigid bone plate and connected with the first suture anchor, the suture positionable across the bone to thereby stabilize the fracture; and

at least one fastener positionable through the rigid bone plate into the bone to hold the rigid bone plate to the bone.

14. A bone suture assembly as defined in claim 13 further including a second suture anchor positionable at a location spaced from the first suture anchor, the second suture anchor connected with the suture.

16. A bone suture assembly as defined in claim 14 further including a passage through bone located between the first and second suture anchors, wherein the suture is disposed within the passage.

18. A bone suture assembly as defined in claim 14 wherein at least one fastener extends across the fracture of the bone.

20. A bone suture assembly as defined in claim 14 wherein the at least one fastener includes a screw.

21. A bone suture assembly as defined in claim 14 wherein the first and second suture anchors are suture retainers.

22. A bone suture assembly as defined in claim 21 wherein the suture retainers include deformable material to hold the suture retainers to the suture.

23. A method for treating a fracture of a bone comprising:

forming at least one passage through the bone, where the passage traverses the fracture;

positioning at least one suture anchor proximate to the bone;

positioning at least one bone plate between the at least one suture anchor and the bone;

fastening the at least one bone plate to the bone with at least one screw;

moving at least one suture through the passage in the bone and through at least one bone plate;

attaching at least one suture to at least one suture anchor; and

tensioning at least one suture to stabilize the fracture of the bone.

24. A method as defined in claim 23 wherein at least one suture anchor is a suture retainer.

26. A method as defined in claim 23 wherein at least one screw has a length less than a diameter of the bone.

27. A method as defined in claim 23 wherein at least one screw has a length greater than a diameter of the bone.

28. A method as defined in claim 27 wherein at least one screw includes at least one nut.

29. A method as defined in claim 28 wherein at least one screw extends across the fracture of the bone.

31. A method as defined in claim 23 wherein attaching at least one suture to at least one suture anchor is performed prior to moving at least one suture, and wherein moving at least one suture includes moving at least one suture attached to at least one suture anchor through at least one passage.

32. A method as defined in claim 31 further including changing the orientation of at least one suture anchor from a first to a second configuration thereby causing at least one suture anchor to become proximate to the bone and impassable through at least one passage.

33. A method as defined in claim 32 wherein tensioning at least one suture includes tensioning at least one suture between at least two suture anchors to stabilize the fracture of the bone.

34. A bone suture assembly as defined in claim 14 wherein the suture includes a plurality of generally parallel suture sections.

35. A bone suture assembly as defined in claim 4 wherein the suture is positionable through the fracture.

36. A bone suture assembly as defined in claim 4 wherein the suture is positionable through the fracture.

37. A bone suture assembly as defined in claim 4 wherein at least one of the bone plates includes a channel extending between a bone-contacting surface of the plate and a non-bone-contacting surface of the plate, and wherein the suture is positioned in the channel.

38. A bone suture assembly as defined in claim 37 wherein the surfaces face in generally opposite directions.

9. EVIDENCE APPENDIX

Cambridge Dictionaries Online: Definition of Plate- Appellant utilized in Response to Office Action mailed January 22, 2007.

10. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.